

## STATEMENT OF WORK

### **GENERAL DESCRIPTION OF WORK:**

The Colorado Department of Transportation (CDOT) is requiring the design, construction, installation, testing and optimization of floor drain fluid treatment/recycle and vehicle wash systems at CDOT maintenance facilities. These systems will be installed at both existing and soon to be constructed CDOT maintenance facilities. The work, as described herein, will be at locations statewide as identified by individual task orders as part of the master contract issued under this statement of interest (SOI). The purpose of the work is to provide water treatment/recycle systems for CDOT facilities that do not have access to city sewer systems and/or are on well water with limited water production.

**RESPONSIBILITY:** The contractor shall be solely responsible for the safe and satisfactory performance of all services required by the contract resulting from this SOI. All personnel working at the site will be required to have training appropriate to the task. A professional engineer will be required to stamp the design drawings. Additionally, professional engineering services will be required through installation and post installation/optimization activities.

**CATEGORIES OF SERVICE:** There are 6 categories of service to be provided by the contractor under this contract as follows:

**Design** - The contractor will be responsible for designing waste water treatment/recycle systems that collect and treat floor drain fluids to a level acceptable for vehicle washing and safe discharge to the environment. Specifically, these treatment units must be individually designed to meet specific shop requirements, such as size, space and contaminant load, at each of the identified maintenance shops. These systems must be capable of removing or consuming oil and grease, volatile constituents, semi-volatile constituents, metals and suspended particulates to levels that will allow safe use for vehicle washing and surface discharge. These systems must also be capable of decreasing the chloride levels to a point where the water is non-corrosive to the vehicles being washed. The pH of the treated water must remain between 6.5 and 9.0. In addition, each system MUST have a component included as part of the process to sterilize the water and disallow bacteria growth. These systems must be fully automated to allow control of water quality and digital readout of real-time parameters. Also, there needs to be a means of automated discharge following treatment and reuse in the event the storage tank volume is exceeded, with assurance that the water quality discharged is safe for the environment. The systems must have a means of purging the water from the discharge line and ensure that the discharge lines won't freeze.

As part of the design, electrical requirements necessary to operate these systems must be provided to CDOT's design team. Electrical requirements and space requirements for the system shall be provided to the design team for new maintenance facilities in a timely fashion to ensure the facility is designed appropriately for the system requirements. Some coordination with the design team will be required. Additionally, a construction set of design drawings must be provided to CDOT's design team to be incorporated as part of a facility construction bid document package. These drawings are to include:

- The layout of all subsurface components;
- All ancillary piping, conduit, etc.;
- Electrical design

Upon completion of the installation of each system, as-built drawings and an Operations and Maintenance Manual, complete with catalogs for replacement parts, warranties and a written manual for operation and maintenance of these systems must be provided to CDOT. The engineering practices associated with the system continue through installation and post operational optimization.

**Construction/Installation** – The contractor will be responsible for constructing each treatment system either on or off site and installing each system at the identified location(s). This work includes coordinating the installation schedule with either the general contractor, if the installation is to be placed in a newly constructed shop, or with the CDOT facility personnel and CDOT's Hazardous Materials Management Unit if the installation is to be placed in an existing CDOT facility. This work includes working with the on-site construction contractor or CDOT staff to ensure electrical service needs are available, verifying placement for installation of all fluid transfer lines and ancillary tanks (where required) and connection of pipes and valves required to provide flexibility for use of either treated water or supplied water.

**Site Restoration** – The contractor will be responsible for restoring the site to the condition it was prior to installation.

**Training** – Following system installation and CDOT occupancy of the shop, the contractor will be responsible for conducting a short training class to CDOT on-site staff, to provide information on how the system operates, what CDOT will need to know and what CDOT will need to do to keep the system operating and maintained along with any other information necessary to ensure these systems continue operating as designed.

**Testing/Monitoring** – Following system installation, the contractor will be responsible for on-site testing of the treated water to ensure the water meets reuse and discharge quality requirements.

**Optimization** – Once the system has been installed and has been operating for a minimum of two months, based on the system performance and sampling results, the system(s) may require optimization to ensure they are performing to contractual requirements. In the event system optimization is required, the contractor will be responsible for altering/improving the system to ensure it is performing as required.